Teaching Today's Learners
Moving to Research Based Instruction

Dr. Mark Taylor
www.taylorprograms.com

The clickers I used were ResponseCard RF LCDs from Turning Technologies. Find more information about using audience response systems on my website www.taylorprograms.com and at www.turningtechnologies.com

If you have an interest in or questions about this instructional technology contact Matthew Ragozine at mrangozine@turningtechnologies.com

Available at www.taylorprograms.com
Teaching Generation NeXt: A Pedagogy for Today’s Learners

Mark Taylor

Faculty struggling to effectively teach next generation students face unique challenges. Faculty must prepare students for new realities and expectations, and use an educational approach that is meaningful and engaging. This chapter provides an overview of specific techniques for fostering learning and growth, and discusses how to use these strategies to help students achieve academic success. The goal is to empower faculty to create a dynamic learning environment that is both challenging and supportive, and to help students develop the skills and knowledge they need to succeed in today’s rapidly changing world.

Available at
www.taylorprograms.com

Leveraging Social Media for Instructional Goals: Status, Possibilities, and Concerns

Mark Taylor

Web-based tools including information access, communications, utility programs, and applications (apps) have transformed the lives of most people today, including instructors and students in higher education. Although much of the content is of questionable quality and some of the interaction is negative, web-based tools have generally benefited postmodern life and higher education. Collaborative read/write tools including social media, SM, also referred to as Web 2.0, have had especially strong impacts on students’ daily and academic lives. With the ubiquity of social media use, especially by students, many faculty are considering if, and how, they can use these platforms as tools in instruction. Can sites like Facebook, Twitter, Tumblr, and Instagram fit into constructivist informed teaching and help instructors help their students reach learning outcomes? What should faculty consider when deciding whether or not, and how, to engage with their students on SM sites for instruction? This chapter addresses issues in leveraging SM for instructional proposals.

Today at UTRGV

• Second largest Hispanic-serving institution in the nation!
• Access to higher education
• High expectations/ academic rigor
• Support/ nurturing environment
• How are we doing with today’s learners?
• May be some issues
• Can we improve instruction for better outcomes?
• Learning
  • Thinking/ reasoning skills
• Persistence
• Engagement through graduation
• Workplace readiness
• The “new” expectations
• Doing things differently
  • Not pandering
  • “Best practices”
  • “Research informed instruction”
• Preparing UTRGV students for the world of 2018 and beyond.
A Generational Perspective

- We are each a member of a generational cohort
  - The products of our times
  - Tend to carry culturally influenced perspectives from that time
  - Generally think we are normal
- Not stereotypes or over generalizations
  - Based on Modal data and Trends
  - “Typical” generational traits
- Doesn’t perfectly describe everyone
- A starting place for understanding.

The Big Demographic Story

Generation NeXt arrives @ 1986

- Starting in around birth year 1986
- From the adaptable, pragmatic scrappers of Generation X
- To the era of the wanted, precious, protected, perfected child
- Another shift in 1995?
Boomer parenting informed by the human potential movement

- A reaction to Traditional parenting they received
  - Critical
  - Distant
  - Physical
  - Authoritarian

New child-centric families

- Parents less authority figures
- More friends/facilitators
- The Self-esteem experiment

“If we tell them how great they are and praise them for everything they do, will all of their gifts be revealed?”

Traditional/cultural/family values can fade in face of dominate culture especially in the digital age.

NeXters are really great people

- Generally positive/confident/optimistic
- Usually very friendly
- Fewer family issues
- Like and admire their parents
- Expressive/direct/honest
- Like to interact/very social.
NeXters are so digital!
- Digitally connected with people/information/an on-line social world
- Web dependent/addicted
- Can locate any information they want or need
- Have trouble judging quality of information they find or are subjected to
- Search is the new learn
- Find is the new know
- “There should an app for that”.

Why they will save us all
- Inclusive
  - More diverse
  - More comfortable with diversity
  - Actually value diversity
  - Value fairness and human rights
  - “Everyone is entitled to…”
- Alert to aggressions
  - Will defend others
  - Might cause conflict in more traditional, conservative families
- Purposeful-interest in social change
  - Want to be involved in something important
  - Want to change the world for the better
  - But may not know how.

They will save us all
- If we connect with their sense of mission and interest in social change
  - They will invest in our classes
  - They will connect with us
  - They will establish future goals based on meaning and purpose
  - Motivate toward future and careers based on security, money, status, flexibility, advancement, etc.
- And positive impact on the world.

The Self-esteem Experiment Results
- We often disconnected the reward from real talent development or significant effort
- May feel entitled to outcomes for showing up
- May see college as a product, outcome
  - Not their personal change
  - May overrate their skills, talents and abilities
  - May underrate the effort required to be successful
- May be extrinsic/lack ownership
  - May not accept responsibility of their own learning
  - See teaching as your job, not learning as theirs
  - May be reluctant to do the hard work of their own learning
- May need lots of encouragement, praise, thanks.
A NATION OF WIMPS

Parents are going to ludicrous lengths to take the lumps and bumps out of life for their children. However well-intentioned, overenthusiastic parental hypercorrection and microscrutiny have the net effect of making kids more fragile. That may be why the young are breaking down in record numbers.

BY YAMA SCHOFF MARDI, PHOTOGRAPHS BY KARIN LYNNE

Gen NeXt
Starting about 1986
Boomer Parenting

- Protecting through involvement
- What's best for the group of children
- Giving children what they need to be successful
- Aspirations— you can do anything
- Everyone wins

Praising
More supportive
"Just have fun."

2.0/ iGen
Starting about 1995
Gen X Parenting

- Protecting through surveillance
- What's best for MY child
- Teaching children how to be successful
- Realistic—do what you're good at
- Only the best win

Pushing
More critical
More competitive

"Just have fun."

Jean M. Twenge, PhD
author of Generation Me

Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy—and Completely Unprepared for Adulthood*

*and What That Means for the Rest of Us
IGen (Compared to NeXt)

- Less narcissistic
- May be less likely to feel entitled to outcomes
- More likely to do the work
- Want very clear guidelines for exactly what they need to do and what is important
- May be less confident
- May be more realistic, pessimistic
- May be more fearful, anxious, worried
- May fear that they are not good enough
- May be less external, more likely to blame selves
- May want a lot of help
- May be sensitive. Easily threatened and may need a "safe space"
- May need lots of encouragement and support.

If you think they are digital now…

Have Smartphones Destroyed a Generation?

More comfortable online than out partying, post-Millennials are adorably physically, their adolescents have ever been. But they're on the brink of a mental-health crisis.


Mental-Health Issues in Students

Focus

iGen/ Generation 2.0

iGen

Jean M. Twenge, Ph.D.
author of Generation Me

iGen

Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy—and Completely Unprepared for Adulthood*
Increasingly Public Outcomes Issues
People are looking behind the curtain

Modest changes for many students even after four years

Modest changes for many students even after four years

Academically adrift
Limited Learning on College Campuses
Richard Arum and Josipa Roksa

IVORY TOWER
IS COLLEGE WORTH THE COST?
IN THEATERS JUNE 13, 2014
2018 perspective by Libertarian economist suggests that the main social function of higher education is not learning or change but “signaling” to employers that graduates have both dedication and submissiveness.

• “Most colleges are seriously out of step with the real world in getting students ready to become workers in the post-college world”.

The current political climate nationally and in many states (including Texas) may not be supportive of higher education funding if higher education is seen as having a negative effect on “the way things are going.”
Escalated employer expectations for readiness

“The Gig Economy”

Contractor arrangements
  - “Plug and play”/ no development

What 22 year old can replace you or me?

“Is entry level really entry level?”

“Internships” often “required” in some professions
  - A luxury not really feasible for many students

We should make work experience available
  - Work study, student workers, in their field

Maybe we should we talk to workplaces about adjusting expectations
  - Something between an unpaid internship and full time employment.

Helping Students be Successful

Be aware of mental issues
  - Anxiety, stress, loneliness, fear

They have these issues in high school
  - And college is more stressful

What do you want when you feel like that?
  - Warm, caring people?
  - You don’t have to be a counselor
  - But you do have to be kind
  - Be willing to listen...

Helping Students be Successful

Help them understand the systems and what it takes to be successful
  - Time, effort

We know what works
  - Required orientation- required, extended, peer led

First year experience/ college success classes
  - Placement testing into appropriate classes

Effective developmental/ remedial courses
  - Intrusive developmental advising
  - Managing transitions

Early alert systems/ support interventions
  - Increasing availability of support services
  - Increasing student use of support services.
Teaching Today’s Students

Research based instruction
- What has been tested and demonstrated to be effective in helping students reach learning outcomes
- Neuroscience/brain science, cognitive social and counseling psychology, communications theory
- Direct testing of instructional methods- Science
- Very different from traditional, lecture based college teaching
- Really very simple.

From Teaching to Learning -
A New Paradigm for Undergraduate Education
By Robert B. Barr and John Tagg

The significant problems we face cannot be solved at the same level of thinking we were at when we created them. -Albert Einstein

A paradigm shift is taking hold in American higher education. In its briefest form, the paradigm that has governed our colleges is this: A college is an institution that exists to provide instruction. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists to produce learning. This shift changes everything. It is both needed and wanted.


Whoever does the work does the learning
- Teaching is not a process of delivery
- It is not something you to students or for students
- It is directing/helping/motivating students do the hard work of their own learning
- From student as recipient of learning to active agent in their own development
- From extrinsic to intrinsic motivation
- From something you make them do to a goal they want.
Some faculty have adopted best practices

But best practice is not standard practice on most campuses

Principles of Best Practice

- **Very clear EXPECTATIONS** for being a successful learner
- **Non-negotiable COMPLIANCE**
- Learning based on student **ACTIVITY** that relate to desired outcomes
- A classroom ritual based around student **INTERACTION**
- Students are **ENGAGED** with the course content, during class, with you and with each other
- Student are **INVESTED**; they care about the class; content and skills
- Students are **RESPONSIBLE** for preparation before class and for working during class
- **REPETITION** stabilizes labile neurons/ makes lasting learning connections
- Learning moves to **HIGHER LEVELS**; “Up Blooms” from recall to applying/skills and evaluating/critical thinking
- Leverages **TECHNOLOGY** for “delivering content”, and engaging
The Best Practices Model

- Improves learning outcomes
  - Lasting remembering and ability to access
  - Skills development
  - Evaluation and critical thinking
- Increases student engagement and persistence
- Increases student compliance
- Increases student responsibility
  - From extrinsic to intrinsic motivation
  - From static to growth mindset
- Improves workplace readiness
- All of your dreams will come true.

Creating Complete Professionals/Adults

**Knowledge/Information**
- Remembering, Understanding
- Effective uploading/able to recall

**Values**
- Affective, Worth, Caring
- Training “instincts”

**Skills**
- Applying, Analyzing, Evaluating

**Habits of the hands**
- Habits of the head

**Affective, Worth, Caring**
- Is this a good idea?
- Is it worth doing?

Improved Learning in a Large-Enrollment Physics Class

*Science, Vol. 332 no. 6031 pp. 862-864*

Louis DesLauriers, Ellen Sch辨len, Carl Wieman

We compared the amounts of learning achieved using two different instructional approaches under controlled conditions. We measured the learning of a specific set of topics and objectives when taught by 3 hours of traditional lecture given by an experienced highly rated instrutor and 3 hours of instruction given by a trained but inexperienced instrutor using instruction based on research in cognitive psychology and physics education. The comparison was made between two large sections (N = 267 and N = 271) of an introductory undergraduate physics course. We found increased student attendance, higher engagement, and more than twice the learning in the section taught using research-based instruction.

Learning and the Brain

- Learning happens in the brain
- Learning can be externally encouraged but only **internally initiated**
  - The goal of teaching is to persuade students to **initiate their internal learning processes**
- Simplest- knowledgeable teacher telling students what they need to know
  - Shockingly ineffective in changing the brain.
- “Whoever does changes their brain.”
  - Active- the student has to do something.
1. Improve student’s future orientation
2. Identify class goals/ link to student’s goals
3. Improve student understanding of class expectations
4. Move content learning out of class
5. Create the necessity of preparing for and attending class
6. Increase classroom activity and engagement
7. Improve assessments and accountability.

Hart Research for AACU 2016
An list of these skills ordered by employer rating of importance would make a great classroom poster!

| Critical thinking and analytical reasoning skills | 79 | 81 |
| The ability to apply knowledge and skills to real-world settings | 79 | 80 |
| The ability to effectively communicate orally | 78 | 85 |
| The ability to work effectively with others in teams | 77 | 83 |
| The ability to effectively communicate in writing | 75 | 82 |
| Ethical judgment and decision-making | 74 | 81 |
| The ability to analyze and solve complex problems | 73 | 70 |
| The ability to locate, organize, and evaluate information from multiple sources | 72 | 68 |
| The ability to analyze and solve problems with people from different backgrounds and cultures | 71 | 56 |
| The ability to innovate and be creative | 69 | 65 |
| Staying current on changing technologies and their applications to the workplace | 68 | 60 |
| Awareness of and experience with diverse cultures and communities within the United States | 58 | 37 |
| The ability to work with numbers and understand statistics | 55 | 56 |
| Staying current on global developments and trends | 49 | 25 |
| Staying current on developments in science | 49 | 26 |
| Awareness of and experience with cultures and societies outside of the United States | 46 | 23 |
| Proficiency in a language other than English | 35 | 23 |
### Brainstorming Benefits

- **Basic physical needs**
  - find work, get money to feed / provide for self and others
- **Safety/ security**
  - money, stable work, safe areas to live, not be tricked or taken advantage of
- **Belonging/ acceptance**
  - how others see you, people you associate with, quality of interactions
- **Esteem/ achievement**
  - money, status, success, advancement
  - to do well, the best you can do, being the best in the world
- **Meaning/ self actualization**
  - Purpose/ impact- doing what you were meant to do, making a difference, best for the world.

### Teaching Generation NeXt: A Pedagogy for Today’s Learners

1. **Improve student’s future orientation**
2. **Identify class goals/ link to student’s goals**
3. **Improve student understanding of class expectations**
   - Helping students understand what it takes to be successful in your class
   - People tend to assume that “what has worked in the past should work now.”
   - Academic effort (if any) of high school not sufficient for most students in college.
   - Clarifying expectations improves compliance
   - Gives you a chance to help students buy-in to doing the work.

4. **Move content learning out of class**
   - Move lower level learning goal to class preparation time to free live class time for you to help them actively develop higher order thinking skills.
   - The first step in “Flipping the class”

---

3. **Improve student understanding of class expectation**

Making the case for their increased **effort**

- *I teach based on best practice- the science of learning*
- *We know Whoever does the work does the learning.*
- *So my job is to help you do the hard work of your own learning*
- *I will make sure that you know what to do to be successful*
- *I will monitor your progress and offer feedback on your progress and improvement*
- *Pretend you have joined “The Learning Gym”*
- *I can’t do the work for you but I will do everything I can to be successful.*
4. Move content learning out of class
   - The introduction of material for remembering and understanding
     - Anything you can explain, you can move out of class
   - The introduction of skills.
     - Anything you can demonstrate you can move that introduction out of class
   - Best out-of-class content assignment will have a built in homework expectation, or link directly to what will be checked for homework.

   Lots of content already available
   - You can package your own best explanation
   - Developing a content library
     - books, articles,
     - found videos (let students find them for you, then review and evaluate during class to build content library)
     - created videos/ voice over slides (as you transition to this model, you might want to record and archive your lectures so you don’t have to give them the next time.)
1. Improve student’s future orientation
2. Identify class goals/ link to student’s goals
3. Improve student understanding of class expectations
4. Move content learning out of class
5. Create the necessity of preparing for and attending class

Ensuring Preparation and Attendance
- Ticket in - especially critical in lower level classes
- Preparation is a necessary precondition for participation in the active class session, which will use the homework
  - It’s your job to make homework appropriate to content and students
  - Maybe learn vocabulary instead of learn process
  - First assignments should just be about compliance
- Need to check each student’s preparation before each class
  - Through CMS, at the door, clicker quiz (redundant)
- Points can be earned for preparation
  - Only redeemable at the start of class
- Points can be earned for in-class activity
  - But only prepared students go into the class activity
  - Unprepared students are given the opportunity to complete the assignment during the class session while other students earn activity points.

Ensuring Preparation
- Assignment points plus activity points need to be worth at least 30% of overall grade to start
- Lots of choices/ mechanisms/ techniques for
  - Making assignments
  - Checking preparation
  - Assigning points between preparation and activity
  - Can you move away from these points?
What to do with the unprepared student?

- Have a conversation
  - NOT “Why don’t you have your homework?”
    - Requires a justification
  - ASK “How it is that you are not prepared for class?”
    - Invites an explanation
- Did you KNOW what to do?
  - Did you understand the assignment?
- Are you ABLE to do it?
  - Can you do work at this level?
- Are you WILLING to do what it takes to be successful?
  - Don’t let them just fade away as they are socialized to the new model
  - Preparation in the first few classes may be a formative assessment of your success in the first three steps of the model and appropriateness of the assignments.

What if they have done the homework but still don’t get it?

1. Consider the possibility that the assignment was too complex, difficult, too long
   - First assignments are super-easy, about compliance, about socializing them to prepare every day and to give you a chance to praise them for their effort
   - Giving a redundant (clicker) quiz can check their real remembering and understanding, and help solidify their learning and ability to access the content (retrieval effect).
   - Before the quiz ask “Does anyone have any questions before the quiz?”
   - They may try to trick you into delivering the content/ killing time/ give the quiz away with a global “I just didn’t get it.”

DON’T DELIVER THE CONTENT OR EXPLAIN

- They have already had the content delivered/ explained and it didn’t work
  - Or else they just didn’t prepare
- Ask “What part of it didn’t you get?”
  - “Did you understand the first question?”
    - “What was the first question?” (effort)
  - “How did you approach this? (strategy)
  - “What answer did you get? Show up how you worked that problem?”
  - “Who can help them with this?”
- Help them, individually and as a group, work it out on their own
- Then clarify.

Teaching Generation NeXt: A Pedagogy for Today’s Learners

1. Improve student’s future orientation
2. Identify class goals/ link to student’s goals
3. Improve student understanding of class expectations
4. Move content learning out of class
5. Create the necessity of preparing for and attending class
6. Increase classroom activity and engagement
   - “Student work should look like the desired outcome.”
Know what to do
Knowledge/ Information
Remembering, Understanding
Actively upload/ practice retrieval
Explain it to someone else
Constructing learning by
finding the words that they need to hear
Able to do it
Skills
Applying, Analyzing, Evaluating
See a model/ Practice
Demonstrate to someone
Willing to do it
Values
Affective/ worth
Identify future benefit
Convince another student
Activity increases learning

Teaching Generation NeXt: A Pedagogy for Today’s Learners

7. Improve assessments and accountability.
   1. Pretest on upcoming content
   2. Quiz on homework
   3. Low level quizzing to start the class on what we did last class session
   4. Low level quizzing to end the class on what we did last class session
   5. Start class with random student offering a 2-3 minute summary of what we did last class session, no notes
   6. End class with random student offers 2-3 minute summary of what we just did in this class session, no notes
   7. “Practice” testing- two midterms, second for a grade
   8. Cumulative testing- improves likelihood of review and helps remembering
      • Any opportunity to help them retrieve helps them remember longer and to be better able to access the information.

   1. Improve student’s future orientation
      Don’t talk to students; talk to the professional they aspire to become
   2. Identify class goals/ link to student’s goals
      Help students understand the whys/ benefits of the course
   3. Improve student understanding of class expectations
      Teach students how to be effective, self-responsible learners
   4. Move content learning out of class
      Flip the class. Meet lower level learning outcomes out of class.
   5. Create the necessity of preparing for and attending class
      Points for preparation, and completed homework is ticket into class activity
   6. Increase classroom activity and engagement
      Whoever does the work does the learning. Class is coordinated student interaction
   7. Improve assessments and accountability
      Combine formative and summative assessments.
To access articles and resources visit www.taylorprograms.com

For questions, additional resources or information about programs contact
Dr. Mark Taylor at mark@taylorprograms.com